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ABSTRACT

Data on employment-related variables of youths (ages 16-21) gathered during the Current Population Survey (CPS) were examined for accuracy by comparing CPS estimates with those of the National Longitudinal Surveys of Labor Force Behavior (NLS). Compared were levels and rates of labor force participation, employment, and unemployment; the number of hours of work being sought and the duration of unemployment for the unemployed; and the number of hours worked and occupational distributions for the employed. The findings revealed the following in NLS estimates as compared to the CPS: higher labor force participation among young men and women, particularly among those whose major activity is attending school; higher unemployment rates for young women and approximately the same rates for young men; more of the unemployed are seeking part-time employment; considerably higher levels of employment, particularly for the young men; employed youth were more likely to work part-time or overtime, depending on their ages; and mean hours worked by the young men are somewhat higher. In light of the differences in the survey procedures used, no definite conclusions were made regarding the accuracy of the NLS versus the CPS. (EM)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ABSTRACT

This study focuses on the accuracy of employment-related measures in the Current Population Survey (CPS) by comparing the CPS estimates with those of another survey--the National Longitudinal Surveys of Labor Force Behavior (NLS) which included approximately 5,000 young men and 5,000 young women between the ages of 14 to 24 when the surveys began in 1966 and 1968, respectively. Since this paper is concerned with youth employment problems, the analysis is restricted to respondents between the ages of 16 and 21.

Differences between the CPS and NLS estimates of survey week employment-related behavior were found. The NLS labor force participation rates were significantly higher than those of the CPS, particularly among youth attending school. The NLS female unemployment rates were significantly higher than the CPS rates, while for the young men the NLS rates were slightly lower. The NLS data also showed a larger number of the unemployed seeking part-time employment than the CPS. The NLS found higher levels of employment and among those at work the NLS youth were more likely to work part time or overtime, depending on their ages. There was no discernible difference in the CPS and NLS estimates of mean hours worked by young women but the corresponding NLS estimates for the young men indicated a slightly higher work activity than the CPS.

The different estimates of the CPS and NLS could arise from differences in survey procedures. The authors believe that lack of self response in the CPS is the most likely explanation for the differences observed.

The focus of this paper is on the accuracy of the information gathered on youth by general population surveys such as the Current Population Survey (CPS).[1] Data accuracy is particularly important for the CPS since this is the primary source of national employment and unemployment statistics. This paper will examine the accuracy of employment-related variables in the CPS by comparing the CPS estimates with those of another survey--two cohorts of the National Longitudinal Surveys of Labor Force Behavior (NLS). The NLS samples included approximately 5,000 young men and 5,000 young women between the ages 14 to 24 when the surveys began in 1966 and 1968, respectively.[2] Since this paper is concerned with youth employment problems we concentrate on the portions of the cohorts between the ages of 16 and 21. Therefore, the data analyzed are from the 1966, 1967 and 1968 NLS surveys of the young men, the 1968, 1969 and 1970 NLS surveys of the young women, and from tables published in Employment and Earnings for the CPS.[3] All data were gathered by the Census Bureau's CPS interviewers and the current labor force questions and coding were identical.

Differences in Survey Procedures

There were several differences between the two surveys. First, the NLS interviews the youth directly while the CPS seeks the information about the young person from the head of the household or some other responsible adult. In the majority of the cases the person interviewed by the CPS is a housewife who would most likely be the youth's mother. We have been unable to find much research which explores the

effects of nonself response on labor force and employment status questions. An unpublished memorandum by Charles Jones and Robert Aquilino of the Census Bureau indicates that net differences in reports of employment status due to nonself response are not statistically different from zero at the 95 percent confidence level for all males and females, 16 years of age and older.[4] A similar finding of nonsignificant differences for all adults occurs in the CPS-Census Match for 1970. The CPS-Census study, however, shows that there were significant differences for 14-17 year olds, and the report goes on to note that there are noticeable differences by age, with the inconsistency dropping substantially as age increases.[5]

Another difference between the CPS and NLS surveys is in the designation of the reference week. The CPS data refer to the specific week which includes the 12th of the month. The NLS data are gathered over a period of several months and refer to the week prior to the one in which the interview is conducted. Thus the CPS data are more likely to be affected by seasonal factors. For our comparisons we have selected CPS data for the month in which the NLS conducted the greatest number of interviews but we used all of the NLS respondents.

A third difference relates to the 1966 survey of the young men. Changes in the definitions of employment and unemployment were introduced in the CPS in January, 1967, but were used in the 1966 NLS coding. Thus CPS-NLS differences for that year may partly reflect these definitional differences. The definitions were identical for the other survey years of the young men and all of the surveys of the young women.

Differing ages at interview, particularly among the young men, also could cause variation between the reports of the two data sources. The NLS male sample consists of individuals who attained ages 16 through 21 as of April 1 in the year of interview, whereas, the CPS includes individuals who were in that age group as of the survey month. Since the CPS data refer to November of each year, the NLS sample of the young men is approximately seven months older than the CPS group. In the case of the young women the age difference is considerably smaller. The NLS includes individuals who had attained the given ages as of January 1 of the interview year, while the CPS again uses the month of the interview. However, since the CPS data refer to January or February the age difference is small.

Finally, the longitudinal nature of the NLS may lead it to differ from the CPS. The NLS loses some of its sample from year to year. There is some evidence that there is more attrition among the unemployed,[6] but a multivariate analysis by the authors has shown this is not substantial. Most of the loss is attributable to young men entering the armed forces which removes them from the civilian population. These individuals are excluded from the CPS as well as the NLS. There also may be conditioning of the respondent's answers by repeated questioning. Such changes apparently occur in the CPS which finds different reports of employment status for different rotation groups.[7] Similar conditioning could occur in the later years of the NLS surveys.

Results of the CPS-NLS Comparison

In this section we compare the levels and rates of labor force participation, employment, and unemployment; the number of hours of work

being sought and the duration of unemployment for the unemployed; and the number of hours worked and occupational distributions for the employed as measured by the Current Population Survey and the National Longitudinal Surveys.

Labor force participation. Tables 1 and 2 present the CPS-NLS comparisons of the labor force participation rates for the young men and women, respectively. As is evident from these tables the labor force participation rates were significantly higher in the NLS for the total population and for the two race groups.[8] The CPS labor force participation rates for young men 16 to 21 year olds were approximately 55 percent, while the corresponding NLS rates were about 15 percentage points higher. Table 3 translates the NLS labor force participation rates into estimates of the labor force using as the base the CPS estimates of the civilian noninstitutional population. The result is a labor force estimate that includes approximately 1.3 to 1.5 million more young men aged 16 to 21 than was found in the CPS.[9]

The major activity of the youth during the survey week helps to explain the large difference between the two surveys.[10] Among the young men attending school the NLS labor force participation rates were approximately sixteen percentage points higher, while there was no significant difference between surveys in these rates for those young men not in school.

Similar findings occurred among the young women, 16 to 21 years of age. Again the NLS found significantly higher labor force participation rates than the CPS but the differences (between 7 and 10 percentage points)

Table 1 CPS and NLS Comparison of Labor Force Participation Rates and Unemployment Rates of Young Men 16 to 21 Years of Age, by Race and School Status, Survey Weeks 1966 to 1968

| Characteristic | 1966[a] | | | | 1967 | | | | 1968 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPS | | NLS[d] | | CPS[e] | | NLS[f] | | CPS[g] | | NLS[h] | |
| | LFPR | UR | LFPR | UR | LFPR | UR | LFPR | UR | LFPR | UR | LFPR | UR |
| Total | 49.8[b] | 10.3[c] | 68.4 | 12.6 | 55.8 | 11.4 | 70.4 | 10.5 | 54.8 | 9.6 | 70.4 | 9.0 |
| White | | | | | 55.8 | 10.0 | 69.9 | 9.3 | 55.1 | 8.2 | 70.1 | 8.3 |
| Nonwhite | | | | | 55.9 | 20.7 | 73.4 | 17.9 | 52.5 | 18.9 | 72.8 | 13.8 |
| Major activity was school | | | | | 36.5 | 13.1 | 53.3 | 17.1 | 37.1 | 12.2 | 53.3 | 14.3 |
| Major activity not school | | | | | 91.3 | 10.2 | 93.8 | 4.8 | 90.7 | 14.4 | 92.9 | 4.3 |

a Figures for 1966 only include men 16 to 19 years of age.
b December 1966 from Employment and Earnings, Vol. 13, No. 7, January 1967.
c November 1966 from Employment and Earnings, Vol. 13, No. 6, December 1966.
d Survey conducted October 1966 to February 1967.
e November 1967 from Employment and Earnings, Vol. 14, No. 6, December 1967.
f Survey conducted October 1967 to January 1968.
g November 1968 from Employment and Earnings, Vol. 15, No. 6, December 1968.
h Survey conducted October 1968 to January 1969.

Table 2 CPS and NLS Comparison of Labor Force Participation Rates and Unemployment Rates of Young Women 16 to 21 Years of Age, by Race and School Status, Survey Weeks 1968 to 1970

| Characteristic | 1968 | | | | 1969 | | | | 1970 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPS[a] | | NLS[b] | | CPS[c] | | NLS[d] | | CPS[e] | | NLS[f] | |
| | LFPR | UR | LFPR | UR | LFPR | UR | LFPR | UR | LFPR | UR | LFPR | UR |
| Total | 43.8 | 11.7 | 50.7 | 15.8 | 42.8 | 9.2 | 53.2 | 15.1 | 45.6 | 11.6 | 54.5 | 16.9 |
| White | 44.9 | 10.5 | 50.8 | 14.6 | 43.4 | 7.8 | 53.6 | 13.6 | 47.1 | 10.1 | 55.3 | 15.5 |
| Nonwhite | 37.0 | 21.3 | 49.8 | 24.1 | 39.2 | 19.2 | 50.4 | 25.8 | 36.4 | 23.1 | 49.3 | 27.3 |
| Major activity was school | 27.1 | 12.2 | 35.3 | 19.7 | 26.0 | 7.9 | 39.9 | 19.2 | 29.3 | 11.5 | 41.7 | 23.9 |
| Major activity not school | 62.3 | 11.4 | 65.0 | 13.4 | 61.7 | 9.8 | 64.6 | 12.7 | 63.2 | 11.6 | 67.0 | 12.5 |

a February 1968, from Employment and Earnings, Vol. 14, No. 9, March 1968.
b Survey conducted January 1968 to May 1968.
c January 1969, from Employment and Earnings, Vol. 15, No. 8, February 1969.
d Survey conducted December 1968 to March 1969.
e February 1970, from Employment and Earnings, Vol. 16, No. 9, March 1970.
f Survey conducted, January 1970 to March 1970.

Table 3 CPS and NLS Comparison of the Number (in thousands) of Young Men 16 to 21 Years of Age in the Labor Force, by Employment Status and Race, Survey Weeks 1967 and 1968

| Characteristic | 1967 | | | | | | 1968 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPS[b] | | | NLS[c] | | | CPS[b] | | | NLS[c] | | |
| | Total | White | Nonwhite | Total | White | Nonwhite | Total | White | Nonwhite | Total | White | Nonwhite |
| Civilian noninstitutional population | 9,009 | 7,821 | 1,188 | 9,009 | 7,821 | 1,188 | 9,349 | 8,115 | 1,234 | 9,349 | 8,115 | 1,234 |
| In labor force | 5,031 | 4,367 | 664 | 6,342 | 5,467 | 872 | 5,121 | 4,473 | 648 | 6,582 | 5,689 | 898 |
| Employed | 4,458 | 3,931 | 527 | 5,676 | 4,958 | 716 | 4,631 | 4,105 | 526 | 5,989 | 5,217 | 774 |
| Employed-major activity school | 1,849 | 1,706 | 143 | 2,381 | 2,159 | 218 | 2,041 | 1,884 | 157 | 2,454 | 2,195 | 256 |
| Employed-major activity not school | 2,608 | 2,224 | 384 | 3,296 | 2,799 | 498 | 2,590 | 2,221 | 369 | 3,536 | 3,023 | 518 |
| Unemployed | 574 | 437 | 137 | 666 | 508 | 156 | 491 | 368 | 122 | 593 | 472 | 124 |
| Unemployed-major activity school | 279 | 231 | 48 | 489 | 394 | 101 | 284 | 215 | 69 | 428 | 339 | 91 |
| Unemployed-major activity not school | 295 | 206 | 89 | 166 | 114 | 55 | 206 | 153 | 53 | 165 | 133 | 33 |
| Unemployed-seeking full time work | 289 | 199 | 89 | 170 | 118 | 52 | 208 | 156 | 51 | 156 | 117 | 40 |
| Unemployed-seeking part time work | 285 | 238 | 48 | 496 | 390 | 104 | 283 | 212 | 71 | 437 | 355 | 84 |

a Totals may not equal sum of parts due to rounding.
b For data sources see footnotes of Table 1.
c The NLS calculations apply NLS rates from Table 1 to CPS totals for the civilian noninstitutional population.

were smaller than for the young men's cohort. Still, based on CPS population figures the NLS found approximately .7 to 1.1 million more labor force participants than the CPS (Table 4). As was the case for the young men, reporting of labor force participation rates was significantly higher in the NLS among the young women whose major activity was school during the survey week. The differences between the rates were three to almost five times larger for the in-school women than for those who had some other major activity (Table 2).

Unemployment. Among young men who were 16 to 21, there was very little difference in the overall unemployment rate between the two sources of data. This was in part due to offsetting differences; the NLS had higher unemployment rates for those youth who listed their major activity as school,[11] while the CPS had significantly higher unemployment rates for young men with another major activity. The CPS also had significantly higher unemployment rates than the NLS for nonwhite youth in 1968.[12]

The women in the NLS reported significantly higher unemployment rates for the entire group and for those attending school. For the three years studied, the NLS reported between 300,000 and 434,000 more unemployed young women than did the CPS. These were increases of 56 to 104 percent in the number of young women who were classified as unemployed. Due to the substantially higher unemployment rates in the NLS, approximately 40 percent of the increased labor force participants found among young women by the NLS survey were unemployed (Table 4).

Approximately 100,000 more young men were classified as unemployed in the NLS than in the CPS as a result of the higher labor force participation rates in the former survey. Yet, as is seen in the last

Table 4 CPS and NLS Comparison of Number (in thousands) of Young Women 16 to 21 Years of Age in the Labor Force, by Employment Status and Race, Survey Weeks 1968 to 1970

| Characteristic | 1968 | | | | | | 1969 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPS | | | NLS[b] | | | CPS | | | NLS[b] | | |
| | Total | White | Nonwhite | Total | White | Nonwhite | Total | White | Nonwhite | Total | White | Nonwhite |
| Civilian noninstitutional population | 10,405 | 9,041 | 1,364 | 10,405 | 9,041 | 1,364 | 10,622 | 9,201 | 1,422 | 10,622 | 9,201 | 1,422 |
| In labor force | 4,559 | 4,055 | 504 | 5,275 | 4,593 | 679 | 4,550 | 3,994 | 557 | 5,651 | 4,932 | 717 |
| Employed | 4,026 | 3,629 | 397 | 4,442 | 3,922 | 516 | 4,131 | 3,681 | 450 | 4,798 | 4,263 | 532 |
| Employed-major activity school | 1,295 | 1,217 | 78 | 1,467 | 1,309 | 156 | 1,342 | 1,249 | 93 | 1,603 | 1,456 | 145 |
| Employed-major activity not school | 2,731 | 2,412 | 319 | 2,975 | 2,613 | 360 | 2,788 | 2,432 | 357 | 3,196 | 2,807 | 387 |
| Unemployed | 534 | 426 | 108 | 834 | 671 | 164 | 419 | 313 | 107 | 853 | 671 | 185 |
| Unemployed-major activity school | 180 | 149 | 31 | 365 | 316 | 50 | 115 | 85 | 30 | 383 | 327 | 57 |
| Unemployed-major activity not school | 353 | 276 | 77 | 469 | 355 | 114 | 305 | 228 | 77 | 470 | 344 | 128 |
| Unemployed-seeking full time work | 331 | 261 | 70 | 410 | 307 | 103 | 278 | 207 | 71 | 403 | 292 | 112 |
| Unemployed-seeking part time work | 203 | 165 | 38 | 424 | 364 | 61 | 141 | 106 | 36 | 450 | 378 | 73 |

(Table continued on next page.)

Table 4 Continued

| Characteristic | 1970 | | | | | |
|---|---|---|---|---|---|---|
| | CPS | | | NLS[b] | | |
| | Total | White | Nonwhite | Total | White | Nonwhite |
| Civilian noninstitutional population | 10,755 | 9,275 | 1,480 | 10,755 | 9,275 | 1,480 |
| In labor force | 4,905 | 4,366 | 539 | 5,861 | 5,129 | 730 |
| Employed | 4,338 | 3,924 | 414 | 4,871 | 4,334 | 530 |
| Employed-major activity school | 1,446 | 1,358 | 88 | 1,732 | 1,589 | 139 |
| Employed-major activity not school | 2,891 | 2,565 | 326 | 3,139 | 2,744 | 391 |
| Unemployed | 567 | 442 | 125 | 991 | 795 | 199 |
| Unemployed-major activity school | 188 | 149 | 40 | 542 | 466 | 77 |
| Unemployed-major activity not school | 379 | 294 | 85 | 449 | 329 | 122 |
| Unemployed-seeking full time work | 349 | 268 | 81 | 506 | 382 | 126 |
| Unemployed-seeking part time work | 218 | 174 | 44 | 485 | 413 | 73 |

a Totals may not equal sum of parts due to rounding.
b For data sources see footnotes of Table 2.
c The NLS calculations apply NLS rates from Table 2 to CPS totals for the civilian noninstitutiona population.

two rows of Table 3, the CPS reported substantially more young men seeking full-time employment. Whereas about half of the CPS sample said they were looking for full-time work, only 25 percent of the NLS sought a full-time job. This difference could be due to the larger number of unemployed in the CPS sample who did not list school as their major activity in the survey week. (We calculated that the CPS contained 50 to 130 thousand more unemployed young men who said that something other than school was their major activity).[13] Almost all of these individuals wanted full-time jobs. On the other hand, the CPS had many fewer unemployed whose major activity was school and who were primarily interested in part-time jobs. Those answering that school was their major activity had much lower labor force participation and somewhat lower unemployment rates in the CPS (Table 1).

Similar to the men, there were substantially more unemployed young women seeking part-time work in the NLS than in the CPS; however, the NLS indicated more young women seeking full-time employment as well (Table 4). The higher labor force participation and unemployment rates in the NLS for women reporting school and women reporting some other major activity in the survey week account for the substantially greater numbers of unemployed women in the NLS seeking both full-time and part-time jobs.

There were no discernible differences in the reports by the young men in the CPS and the NLS on duration of unemployment. Approximately the same proportions in both surveys reported being unemployed for less than five weeks and fifteen or more weeks. The young women in the NLS, on the other hand, reported a considerably shorter duration of unemployment

during 1968 and 1970, but had somewhat lower percentages reporting short periods of unemployment during 1969. This difference may have been due to the use of January data for the CPS in 1969 and February data for 1968 and 1970. Because of the large month-to-month variation in the CPS reports of duration we hesitate to draw any conclusion.

Employment. The NLS found significantly higher levels of employment than did the CPS--about 25 percent more employed young men and 10 percent more employed young women. For example, the NLS estimates of youth employment in 1968 exceeded those of the CPS by approximately 1.8 million, of whom roughly three-quarters were young men. The differences in employment were somewhat more prevalent among the nonwhite segments of both NLS samples and among those persons listing their major activity as something other than school.

The distribution of hours worked during the survey week also was substantially different in the two surveys. The NLS found more part-time workers and workers employed overtime (in excess of 40 hours) than did the CPS (Tables 5 and 6). The number of 16 to 21 year old youth employed for more than 40 hours was from 50 to 100 percent greater in the NLS than in the CPS.

The differences in the two surveys' reports of the number of hours worked by youth were related to the age of the respondents. Workers who were 16 and 17 years of age were more likely to be working only part time. Therefore, of the additional workers in these ages reported by the NLS, approximately 55 percent of the young men and 85 percent of the young women were employed less than 35 hours a week. On the other hand, the

Table 5 CPS and NLS Comparison of the Number (in thousands) of Young Men at Work in Nonagricultural Industries, by Hours Worked and Age, Survey Weeks 1967 and 1968[a]

| Characteristic | 1967 | | 1968 | |
|---|---|---|---|---|
| | CPS[b] | NLS[c] | CPS[b] | NLS[c] |
| Total at work | | | | |
| 16-17 | 1,064 | 1,618 | 1,109 | 1,726 |
| 18-19 | 1,396 | 1,647 | 1,565 | 1,956 |
| 20-21 | 1,576 | 1,753 | 1,531 | 1,619 |
| 16-21 | 4,036 | 5,018 | 4,205 | 5,301 |
| On part time schedule | | | | |
| 16-17 | 883 | 1,183 | 947 | 1,284 |
| 18-19 | 555 | 600 | 665 | 681 |
| 20-21 | 351 | 395 | 382 | 357 |
| 16-21 | 1,789 | 2,178 | 1,994 | 2,322 |
| On full time schedule | | | | |
| 16-17 | 176 | 435 | 162 | 442 |
| 18-19 | 841 | 1,047 | 900 | 1,275 |
| 20-21 | 1,230 | 1,358 | 1,150 | 1,262 |
| 16-21 | 2,247 | 2,840 | 2,211 | 2,979 |
| Working over 40 hours | | | | |
| 16-17 | 50 | 146 | 39 | 180 |
| 18-19 | 277 | 519 | 290 | 687 |
| 20-21 | 468 | 690 | 389 | 654 |
| 16-21 | 795 | 1,355 | 718 | 1,521 |
| Mean hours, all at work | | | | |
| 16-17 | 19 | 23 | 19 | 24 |
| 18-19 | 33 | 35 | 31 | 35 |
| 20-21 | 40 | 41 | 39 | 41 |
| 16-21 | 31 | 32 | 30 | 33 |
| Mean hours, those on full time schedule | | | | |
| 16-17 | 41 | 42 | 40 | 43 |
| 18-19 | 43 | 45 | 41 | 45 |
| 20-21 | 44 | 46 | 43 | 45 |
| 16-21 | 43 | 44 | 42 | 45 |

a Totals may not equal sum of parts due to rounding.
b For data sources see footnotes of Table 1.
c The NLS calculations apply NLS rates from Table 1 to CPS totals for the civilian noninstitutional population.

Table 6 CPS and NLS Comparisons of the Number (in thousands) of Young Women at Work in Nonagricultural Industries, by Hours Worked and Age, Survey Weeks 1968 to 1970[a]

| Characteristics | 1968 | | 1969 | | 1970 | |
|---|---|---|---|---|---|---|
| | CPS[b] | NLS[c] | CPS[b] | NLS[c] | CPS[b] | NLS[c] |
| Total at work | | | | | | |
| 16-17 | 773 | 1,035 | 789 | 1,209 | 969 | 1,272 |
| 18-19 | 1,462 | 1,583 | 1,419 | 1,538 | 1,486 | 1,510 |
| 20-21 | 1,647 | 1,618 | 1,773 | 1,740 | 1,726 | 1,877 |
| 16-21 | 3,882 | 4,236 | 3,981 | 4,487 | 4,181 | 4,659 |
| On part time schedule | | | | | | |
| 16-17 | 708 | 916 | 730 | 1,121 | 859 | 1,112 |
| 18-19 | 515 | 579 | 532 | 563 | 602 | 598 |
| 20-21 | 374 | 369 | 400 | 433 | 476 | 480 |
| 16-21 | 1,598 | 1,864 | 1,662 | 2,118 | 1,936 | 2,190 |
| On full time schedule | | | | | | |
| 16-17 | 65 | 120 | 59 | 88 | 110 | 160 |
| 18-19 | 947 | 1,004 | 887 | 977 | 884 | 912 |
| 20-21 | 1,273 | 1,248 | 1,373 | 1,299 | 1,250 | 1,397 |
| 16-21 | 2,284 | 2,372 | 2,319 | 2,365 | 2,245 | 2,469 |
| Working over 40 hours | | | | | | |
| 16-17 | 12 | 46 | 11 | 22 | 20 | 38 |
| 18-19 | 143 | 230 | 126 | 234 | 110 | 228 |
| 20-21 | 199 | 313 | 226 | 277 | 176 | 344 |
| 16-21 | 353 | 589 | 362 | 534 | 306 | 610 |
| Mean hours, all at work | | | | | | |
| 16-17 | 14 | 15 | 14 | 14 | 15 | 16 |
| 18-19 | 31 | 31 | 31 | 30 | 30 | 30 |
| 20-21 | 36 | 36 | 36 | 35 | 35 | 36 |
| 16-21 | 29 | 29 | 29 | 27 | 28 | 28 |
| Mean hours, those on full time schedule | | | | | | |
| 16-17 | 38 | 39 | 36 | 39 | 38 | 37 |
| 18-19 | 39 | 40 | 40 | 39 | 39 | 40 |
| 20-21 | 40 | 41 | 40 | 39 | 39 | 40 |
| 16-21 | 40 | 40 | 40 | 39 | 39 | 40 |

a Totals may not equal sum of parts due to rounding.
b For data sources see footnotes of Table 2.
c The NLS calculations apply NLS rates from Table 2 to CPS totals for the civilian noninstitutional population.

older youth were more likely to include persons working overtime, and the NLS found many more 18-21 year olds working for over 40 hours per week as compared with the CPS. In some cases the difference in the number working overtime exceeded the total numerical differences between the two samples for this age group. Finally, since the NLS reported more youth working overtime and a slightly smaller percentage working part time (particularly among the men), the NLS found somewhat higher mean hours of work for the entire sample and for workers on full-time schedules. The differences were more pronounced among the young men, probably reflecting the smaller percentage working part time.[14]

Summary and Conclusions

We have found that the NLS when compared to the CPS reports:

1) Significantly higher labor force participation among young men and women, particularly among those whose major activity is attending school. These differences occurred in both white and nonwhite groups.
2) Significantly higher unemployment rates for young women and approximately the same rates for young men. For both young men and women the number of unemployed is higher.
3) More of the unemployed are seeking part-time employment.
4) Considerably higher levels of employment, particularly for the young men.
5) The youth are more likely to work either part time or overtime depending on their age, and mean hours worked by the young men in the survey week are somewhat higher.

16

Obviously, we cannot say conclusively that the NLS reports are more accurate than those of the CPS in the light of the differences in the two surveys mentioned earlier. If, however, the NLS is correct these findings have significant implications. For 1968, the CPS youth labor force would have been understated by almost one-fourth or nearly 2.2 million young men and women. Employment would have been approximately 1.75 million higher and unemployment would have increased by 400,000 (an increase of almost 40 percent over the CPS reported number). This would mean that there was a sizeable "undercount" by the CPS.

Although obviously somewhat biased judges, we tend to believe the NLS estimates. The pattern of reported differences appears consistent over time, tending to negate the possibility that the longitudinal nature of the studies or the difference in definitions during 1966 leads to the differences in findings for the two surveys. The fact that the average NLS respondent was seven months older than his CPS counterpart, while conceivably causing some of the observed differences, could not have accounted for all of the greater labor force participation found in the NLS. As a check, we reran sections of Table 1 restricting the NLS sample to young men 15 through 20 years of age and compared the findings with the CPS results for men 16 through 21 years old. Even though the NLS sample was now younger and the difference between the two surveys narrowed, we still found higher labor force participation for the NLS.[15] We also conducted some analyses which restricted the NLS sample to interviews collected in the same month as the CPS data. The results of such a restriction on the NLS data did not appear to make sizeable differences in the estimates of the employment-related variables.

At the same time, the nature of the differences we observed between the two samples is consistent with what one would expect due to problems of nonself response. When the youth are in school one could expect that their mothers would consider them out of the labor force. The mother would tend to disregard or be unaware of part-time employment and might not even know of sporadic attempts by their children to look for employment. It is also quite possible that the mother would not know of overtime work in the survey week and would report the standard full-time schedule. Finally, for those older youths who are only tangentially attached to the household (e.g., they are away at college or move in and out of the household depending on their financial state and familial relationships), the mother may have no idea of their employment status.[16]

While our leanings are toward the NLS data, there are at least two possibilities for testing the accuracy of the data sets. First, the Census Bureau could expand its Methods Test Panel and seek a larger sample of young self respondents to reinterview after another member of the household has provided labor force data. The expansion would have to be substantial, however, in order to have a large enough sample in this limited age group.

Second, if the NLS estimates are more accurate and there are more youth in the labor force seeking employment than the CPS shows, there may be some indirect evidence which we can observe over the next year. The new youth programs under the Youth Employment and Demonstration Projects Act of 1977 (YEDPA) will provide roughly 200,000 additional youth slots.[17] If the CPS is correct the filling of these slots would come primarily from among the unemployed. On the other hand, if many of the people the CPS says are out of the labor force are really seeking work as the NLS implies,

the slots will be filled without having much impact on the CPS measure of youth unemployment. We should be prepared for the YEDPA programs to "fail" to lower unemployment if in fact we are presently not counting youth correctly.

FOOTNOTES

1. This is a revised version of a paper presented to the Conference on Unemployment Statistics and Youth held at U.C.L.A. on February 11-12, 1978. We wish to thank Jean Haurin for her valuable help with this project.

2. The data are gathered by the U.S. Bureau of the Census and analyzed by The Ohio State University under contract with the Office of Research and Development, ETA, U.S. Department of Labor. The views and opinions in this paper do not necessarily reflect those of any of the above agencies. For further information on the surveys see Herbert S. Parnes, et al., Career Thresholds, Manpower Research Monograph No. 16, Vol. 1 (Washington: Government Printing Office, 1970) and John R. Shea, et al., Years for Decision, Manpower Research Monograph No. 24, Vol. 1 (Washington: Government Printing Office, 1971).

3. The reader should also see Parnes, et al., op. cit., Appendix E for an earlier comparison of the 1966 young men's survey and the October 1966 CPS.

4. Charles Jones and Robert Aquilino, "Memorandum for Walter M. Perkins, Subject: Methods Test Phase III: Second Report on the Accuracy of Retrospective Interviewing and Effects of Nonself Response on Labor Force Status," unpublished memorandum within the Bureau of the Census, January 29, 1970.

5. Bureau of the Census, Accuracy of Data for Selected Population Characteristics as Measured by the 1970 CPS-Census Match, PHC(E)-11 (Washington: Government Printing Office, 1975), p. 11 and Table 33. We should note that the poorer CPS-Census match for the youth may have been due to factors other than nonself response.

6. See Frederick A. Zeller, et al., Career Thresholds, Manpower Research Monograph No. 16, Vol. 2, (Washington: Government Printing Office, 1971) Appendix A, and Roger D. Roderick, et al., Years for Decision, Manpower Research Monograph No. 24, Vol. 2 (Washington: Government Printing Office, 1973), pp. 15-20.

7. Robert Pearl and Joseph Waksberg, "Effects of Repeated Household Interviews in the Current Population Survey," unpublished paper presented at the 47th National Conference of the American Marketing Association, Dallas, Texas, June 17, 1964.

8. Our use of the word significant means that we have rejected the null hypothesis of equality of proportions in the two surveys. Each of the statistical tests used a two-tail criterion, the type 1 error was 5 percent and the standard error of the estimator was increased by 1.4 to reflect the complex design of the two surveys.

   The CPS sample is self weighting with each respondent representing 1,200 other individuals in the universe. The estimated sample sizes were obtained by dividing the corresponding universe totals by 1,200. The actual number of sample cases was used for the NLS.

   We were unable to make tests of significance of the levels presented in Tables 3-6 since we did not have the variances for the CPS data. Comparisons of the two surveys for this information is descriptive.

9. We implicitly assume that the attrition from the NLS does not affect the labor force participation rates.

10. Major activity is defined by the survey respondent in his or her answer to the question "What was...doing most of last week--Working, Keeping house, Going to school, or something else?"

11. The difference was statistically significant in 1967 but was not in 1968.

12. The NLS sample did not interview persons who were in the armed forces at the time of the first survey but who returned to civilian life in a subsequent year. To the extent that these veterans are more likely to participate in the labor force or to experience unemployment the corresponding NLS rates would be lower than the CPS rates. Since the NLS labor force participation rates exceeded the CPS estimates we feel that this difference in survey design is not important for this variable. The lower unemployment rate in the NLS for nonwhite youth, however, could be caused by this difference.

13. The CPS and NLS had about the same labor force participation rates for this group but the unemployment rate was much higher in the CPS.

14. Finally, the single digit occupational distributions of the two samples were very similar. There is no evidence that the additional workers reported in the NLS were concentrated in any particular occupational group.

15. We were also able to use the age attained at survey month for the young women in some special runs. These too did not noticeably alter the conclusions.

16. The fact that we found smaller differences in labor force participation rates among the young women is also consistent with the nonself response hypothesis, since these individuals are more likely than their male counterparts to be in their own household and, thus, are more likely to be reporting for themselves.

17. The estimate is very inexact since it is not clear how the CETA prime sponsors will divide their funds between in-school and out-of-school programs.

## The Center for Human Resource Research

The Center for Human Resource Research is a policy-oriented research unit based in the College of Administrative Science of The Ohio State University. Established in 1965, the Center is concerned with a wide range of contemporary problems associated with human resource development, conservation and utilization. The personnel include approximately twenty senior staff members drawn from the disciplines of economics, education, health sciences, industrial relations, management science, psychology, public administration, social work and sociology. This multidisciplinary team is supported by approximately 50 graduate research associates, full-time research assistants, computer programmers and other personnel.

The Center has acquired pre-eminence in the fields of labor market research and manpower planning. The National Longitudinal Surveys of Labor Force Behavior have been the responsibility of the Center since 1965 under continuing support from the United States Department of Labor. Staff have been called upon for human resource planning assistance throughout the world with major studies conducted in Bolivia, Ecuador and Venezuela, and recently the National Science Foundation requested a review of the state of the art in human resource planning. Senior personnel are also engaged in several other areas of research including collective bargaining and labor relations, evaluation and monitoring of the operation of government employment and training programs and the projection of health education and facility needs.

The Center for Human Resource Research has received over one million dollars annually from government agencies and private foundations to support its research in recent years. Providing support have been the U.S. Departments of Labor, State, and Health, Education and Welfare; Ohio's Health and Education Departments and Bureau of Employment Services; the Ohio cities of Columbus and Springfield; the Ohio AFL-CIO; and the George Gund Foundation. The breadth of research interests may be seen by examining a few of the present projects.

The largest of the current projects is the National Longitudinal Surveys of Labor Force Behavior. This project involves repeated interviews over a fifteen year period with four groups of the United States population: older men, middle-aged women, and young men and women. The data are collected for 20,000 individuals by the U.S. Bureau of the Census, and the Center is responsible for data analysis. To date dozens of research monographs and special reports have been prepared by the staff. Responsibilities also include the preparation and distribution of data tapes for public use. Beginning in 1979, an additional cohort of 12,000 young men and women between the ages of 14 and 21 will be studied on an annual basis for the following five years. Again the Center will provide analysis and public use tapes for this cohort.

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(Continued on inside of back cover)

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